IN THE CLAIMS:

Please amend claim 1 as follows:

LISTING OF CURRENT CLAIMS

1. (Currently Amended) A data processing system comprising:

a microprocessor comprising:

a central processing unit (CPU) for executing programs or calculating data; and

a ~~built-in~~ non-volatile program memory ~~within the microprocessor~~ for storing a startup program wherein the non-volatile program memory and the CPU are on-chip built-in within the same microprocessor package;

a volatile memory for storing programs or data temporarily;

a permanent memory for storing an application program permanently;

a bus connected to the microprocessor, the volatile memory, and the permanent memory for transmitting programs or data; and

a power supply comprising a switch and providing power to the data processing system to maintain normal operation of the data processing system;

wherein, while the switch of the power supply is turned on, the startup program stored in the non-volatile program memory is initialized first to load the application program from the permanent memory into the volatile memory via the bus, so that the CPU only needs to call and execute the application program in the volatile memory, instead of the permanent memory.

2. (Original) The data processing system of claim 1, wherein the non-volatile program memory is a mask ROM.

3. (Original) The data processing system of claim 1, wherein the non-volatile program memory is a one-type programmable ROM, flash memory, a programmable logic array, or a hard-wired code table.

4. (Original) The data processing system of claim 1, wherein the capacity of the non-volatile program memory is 1K bytes.

5. (Original) The data processing system of claim 1, wherein the size of the application program is between 32K and 1M bytes, and is larger than the capacity of the non-volatile program memory.

6. (Original) The data processing system of claim 1, wherein the volatile memory is a built-in static random access memory (SRAM) inside the microprocessor.

7. (Original) The data processing system of claim 1, wherein the volatile memory is an external dynamic random access memory (DRAM) outside the microprocessor.

8. (Original) The data processing system of claim 1, wherein the volatile memory is used for temporarily storing the temporary data generated by the application program and the CPU.

9. (Original) The data processing system of claim 1, wherein the permanent memory is an external NAND type flash memory outside the microprocessor.

10. (Original) The data processing system of claim 6, the permanent memory is used for storing the application program and is provided for the CPU to access data.

11. (Original) The data processing system of claim 1, wherein the data processing system is a digital still camera (DSC).

12. (Original) The data processing system of claim 1, wherein the data processing system is a digital video camera (DVC).

13. (Original) The data processing system of claim 1, wherein the data processing system is a digital voice recorder.

14. (Original) The data processing system of claim 1, wherein the data processing system is an MP3 player.

15. (Original) The data processing system of claim 1, wherein while the switch of the power supply is turned off, the application program stored in the volatile memory vanishes; however, the startup program stored in the non-volatile program memory and the application program stored in the permanent memory are kept.

16. (Original) The data processing system of claim 1, wherein the data processing system does not comprise an external non-volatile program memory for storing the application program.